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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,500	11/05/2003	Ryoichi Nakatani	ASA-350-07	6292

24956 7590 09/09/2005

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.  
1800 DIAGONAL ROAD  
SUITE 370  
ALEXANDRIA, VA 22314

EXAMINER
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RENNER, CRAIG A

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/700,500		NAKATANI ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Craig A. Renner		2652	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-33 is/are pending in the application.
- 4a) Of the above claim(s) 23-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 07/710,775.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05 November 2003</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of "Species VIII, Fig. 16, including Claims 27-30," "New claim 31" and "New claims 32-33" in the replies filed on 29 April 2005 and 19 August 2005 is acknowledged. Accordingly, claims 23-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to one or more non-elected inventions/species, there being no allowable generic or linking claim.

### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copies have been filed in parent Application No. 07/710,775, filed on 05 June 1991.

### ***Drawings***

3. The drawings are objected to because of the following informalities:

a. The drawings fail to comply with 37 CFR 1.83(a). Under 37 CFR 1.83(a), the drawings must show every feature of the invention specified in the claims.

Therefore, the "perpendicular magnetic recording medium," set forth in line 3 of independent claim 27 and line 2 of independent claim 31, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

b. In FIG. 13, "(PRIOR ART" should be corrected to read --(PRIOR ART)--.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

Art Unit: 2652

requested in correcting any errors of which applicant may become aware in the specification.

### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 27-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-27 of U.S. Patent No. 5,390,061. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

The only item lacking in the patented claims is the magnetic head being used in combination with a "perpendicular magnetic recording medium." Official notice is taken of the fact that it is notoriously old and well known in the art to use a magnetic head with a perpendicular magnetic recording medium in the same field of endeavor for the purpose of increasing data storage capacity by enabling higher bit density. It would

Art Unit: 2652

have been obvious to a person having ordinary skill in the art at the time the invention was made to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium since such increases data storage capacity by enabling higher bit density.

8. Claims 27-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 5,726,837. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

The only item lacking in the patented claims is the magnetic head being used in combination with a "perpendicular magnetic recording medium." Official notice is taken of the fact that it is notoriously old and well known in the art to use a magnetic head with a perpendicular magnetic recording medium in the same field of endeavor for the purpose of increasing data storage capacity by enabling higher bit density. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium since such increases data storage capacity by enabling higher bit density.

9. Claims 27-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,011,674. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

The only item lacking in the patented claims is the magnetic head being used in combination with a "perpendicular magnetic recording medium." Official notice is taken of the fact that it is notoriously old and well known in the art to use a magnetic head with a perpendicular magnetic recording medium in the same field of endeavor for the purpose of increasing data storage capacity by enabling higher bit density. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium since such increases data storage capacity by enabling higher bit density.

10. Claims 27-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-64 of U.S. Patent No. 6,278,593. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

The only item lacking in the patented claims is the magnetic head being used in combination with a "perpendicular magnetic recording medium." Official notice is taken of the fact that it is notoriously old and well known in the art to use a magnetic head with a perpendicular magnetic recording medium in the same field of endeavor for the purpose of increasing data storage capacity by enabling higher bit density. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium since such increases data storage capacity by enabling higher bit density.

11. Claims 27-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,483,677. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

The only item lacking in the patented claims is the magnetic head being used in combination with a "perpendicular magnetic recording medium." Official notice is taken of the fact that it is notoriously old and well known in the art to use a magnetic head with a perpendicular magnetic recording medium in the same field of endeavor for the purpose of increasing data storage capacity by enabling higher bit density. It would have been obvious to a person having ordinary skill in the art at the time the invention



Art Unit: 2652

was made to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium since such increases data storage capacity by enabling higher bit density.

12. Claims 27-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,687,099. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

The only item lacking in the patented claims is the magnetic head being used in combination with a “perpendicular magnetic recording medium.” Official notice is taken of the fact that it is notoriously old and well known in the art to use a magnetic head with a perpendicular magnetic recording medium in the same field of endeavor for the purpose of increasing data storage capacity by enabling higher bit density. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have claimed the magnetic head be used in combination with a perpendicular magnetic recording medium since such increases data storage capacity by enabling higher bit density.

***Pertinent Prior Art***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. This includes Akiyama et al. (US 4,593,332), which teaches a magneto-resistance effect film formed between a first non-magnetic metal layer (12) and a second non-magnetic metal layer (13), the magneto-resistance effect film includes a first ferromagnetic layer (11), a second ferromagnetic layer (11), and an intermediate insulating layer (22) formed between the first ferromagnetic layer and the second ferromagnetic layer, and the magneto-resistance effect film is arranged so that a tunnel current flows between the first ferromagnetic layer and the second ferromagnetic layer through the intermediate insulating layer; and Bhattacharyya et al. (US 4,881,143), which teaches a magneto-resistance effect film formed between a first non-magnetic metal layer (61) and a second non-magnetic metal layer (71), the magneto-resistance effect film includes a first ferromagnetic layer (67), a second ferromagnetic layer (71), and an intermediate insulating layer (69) formed between the first ferromagnetic layer and the second ferromagnetic layer.

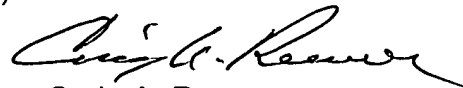
***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Renner whose telephone number is (571) 272-7580. The examiner can normally be reached on Tuesday-Friday 9:00 AM - 7:30 PM.

Art Unit: 2652

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Craig A. Renner  
Primary Examiner  
Art Unit 2652

CAR